

# Texas Water Development Board

P.O. Box 13231, 1700 N. Congress Ave.  
Austin, TX 78711-3231, [www.twdb.texas.gov](http://www.twdb.texas.gov)  
Phone (512) 463-7847, Fax (512) 475-2053

**TO:** Board Members

**THROUGH:** Melanie Callahan *mc*  
Executive Administrator

Carolyn L. Brittin, Deputy Executive Administrator  
Water Resources Planning & Information *CB*

**FROM:** James E. Scott III, Director, Texas Natural Resources Information System ~~ES~~  
Felicia Retiz, Team Lead, Strategic Mapping Program *FR*

**DATE:** June 13, 2012

**SUBJECT:** Consider authorizing the Executive Administrator to negotiate and execute contracts and purchase orders for capital expenditures up to \$175,000, in addition to any funds contributed by other entities, to acquire elevation data for the Floodplain and Strategic Mapping Programs.

## ACTION REQUESTED

Approval of authorization for necessary action to acquire data for Floodplain and Strategic Mapping Programs.

## BACKGROUND

The Texas Water Development Board (TWDB) through its Texas Natural Resources Information System (TNRIS) serves as the primary source for developing statewide geographic data used by government and the public. The sources of State funding for geographic data are based on capital budgets allocated to the Strategic Mapping Program (StratMap) and the National Flood Insurance Program (NFIP). For the current biennium the TWDB was not appropriated funding for these capital expenditures.

StratMap was established by the 75th Texas Legislature to build and maintain authoritative, statewide digital, geographic data for Texas. The StratMap program drives lower costs and increases inter-government coordination through data acquisition partnerships. StratMap

### Our Mission

To provide leadership, planning, financial assistance, information, and education for the conservation and responsible development of water for Texas

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acquires and manages the data that are the foundation of the state basemap which provides current geographic information to support economic development, natural resources, infrastructure, public safety and emergency management in addition to a wide array of other state strategic priorities. The StratMap data sets include:

1. Aerial imagery
2. Elevation and Contours
3. Transportation
4. Political Boundaries
5. Surface water (National Hydrography and Watershed Boundary Dataset)
6. Soils

Texas ranks second in the nation in flood related damage and losses, and damaging floods affect all areas of the state. To strengthen the state's capacity to improve floodplain mapping, the 80th Legislature allocated funding to develop better base map data.

The accuracy of flood maps is most affected by the quality of elevation data. The floodplain mapping data funds are applied to develop new topographic data by watersheds that will serve as the basis for new floodplain studies and Digital Flood Insurance Rate Maps (DFIRMS). The NFIP is administered by the Federal Emergency Management Agency (FEMA) and established a Cooperative Technical Partnership with TWDB/TNRIS in October 2000 to support coordinated base map activities.

The elevation data products created for floodplain mapping are also used to update the National Elevation Dataset maintained by the USGS and are based on contributions from the StratMap program.

Funds from 2011 federal receipts have been received in the current year and allocated to data acquisition. Participation is being sought from prospective local and regional partners to increase project areas, coordinate collection efforts and align priority areas.

## **PROJECT OBJECTIVE**

### **High Resolution Elevation Data for Floodplain Mapping and Soil Conservation**

Detailed elevation data acquired from airborne laser technology (lidar) is a technologically advanced method to map land surface elevation. Data are created to a statewide specification that meets or exceeds federal requirements and is collected to cover complete watersheds or sub-basins in Texas.

All elevation data collection includes third party quality assurance and becomes available to the public for reproduction cost only.

## **KEY ISSUES**

### **Contribution to Elevation Mapping in Texas**

This project will contribute to increasing accuracy and coverage for elevation data for areas that represent high priorities for these data. Two project areas have been identified for this project including portions of Johnson, Ellis, Hill and Navarro counties in North Texas and portions of Wilson and Karnes in South Texas.

### **Use of High Priority Imagery and Data Sets (HPIDS) contract**

The HPIDS contract has created a highly competitive and efficient process to procuring geographic information for Texas. The contract has been used successfully by local government to partner with TWDB and has allowed for direct payments to the data providers, bringing new levels of efficiency to intergovernmental projects. The recent projects performed by the HPIDS commercial data providers has established quality data at a unified standard for the state.


### **Expanding Inter-government Coordination**

The federal resource and emergency management agencies are coordinating and sharing data as data requirements increase and in response to the current budgeting environment. TNRIS is expanding its outreach to federal, regional, and local governments. Combining technical and product specifications is producing more unified data types that are accessible to more people.

## **RECOMMENDATION**

Authorize the Executive Administrator to negotiate and execute contracts and purchase orders for capital expenditures up to \$175,000 in addition to any funds contributed by others to acquire geographic data in support of the Strategic Mapping and National Flood Insurance Programs.

This recommendation has been reviewed by legal counsel and is in compliance with applicable statutes and Board rules.

  
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Ken Petersen  
General Counsel